

MASTER INDEX: DOCKET A-97-50

**CONTROL OF EMISSIONS OF AIR POLLUTION
FROM NEW MARINE ENGINES AT OR ABOVE 37kW
ANPRM**

Subject Matter

- I. Notice of Intent or ANPRM, if any
- II. Items Considered in Developing Proposal
- III. Proposal
- IV. Additional Items Considered After Proposal in Developing Final Rule
- V. Final Action

Updated November 20, 2000

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**Category II-D: Correspondence Received from Persons
Outside the Agency**

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
II-D-01	6-2-98	Ellis/Clean Cam Technology Systems, Bakersfield, CA	5-27-98
II-D-02	6-15-98	Marvin/private citizen, Butler, PA	6-12-98
II-D-03	6-16-98	Spackman/International Association of Drilling Contractors (IADC), Houston, TX	6-12-98
II-D-04	6-18-98	Shannon/private citizen, Dallas, TX	6-15-98
II-D-05	6-19-98	Stegink/Neal, Gerber & Eisenberg, on behalf of Engine Manufacturers Association (EMA), Chicago, IL	6-18-98
II-D-06	6-22-98	Lichtner/MerCruiser Sterndrives & Inboards, Stillwater, OK & Bucheger/Mercury Marine, Fond du Lac, WI	6-19-98
II-D-07	6-22-98	McKnight/National Marine Manufacturers Association, Washington, DC	6-22-98
II-D-08	6-22-98	Kelly/American Waterways Operators, Arlington, VA	6-22-98
II-D-09	6-22-98	Harkins/Lake Carriers' Association, Cleveland, OH	6-17-98
II-D-10	6-22-98	Metcalf/Chamber of Shipping of America, Washington, DC	6-19-98
II-D-11	6-22-98	Perry/Volvo Penta of Americas, Chesapeake, VA	6-18-98
II-D-12	6-22-98	Tickle/Department of the Navy, Washington, DC	6-22-98
II-D-13	7-27-98	Desai/Port of Corpus Christi, TX	6-22-98

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**Category II-E: EPA Memoranda of Meetings/Telephone
Conversations with Outside Persons**

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
II-E-01	12-8-98	A. Stout, EPA, re meeting with Engine Manufacturers Association (EMA)	2-6-98
II-E-02	12-8-98	J. Revelt, EPA, re meeting with EMA/National Marine Manufacturers Association (NMMA)	5-29-98
II-E-03	12-8-98	J. Revelt, EPA, re 6-5-98 call with N. Weir, Yanmar	11-20-98
II-E-04	12-8-98	J. Revelt, EPA, re 6-4&5-98 calls with K. Metcalf, U.S. Chamber of Shipping	11-20-98
II-E-05	12-8-98	J. Revelt, EPA, re 6-9-98 meeting with A. Wright, Lloyd's Register	11-20-98
II-E-06	12-8-98	J. Revelt, EPA, re 6-12-98 conference call with engine marinizers	11-20-98
II-E-07	12-8-98	A. Stout, EPA, re 6-16-98 meeting with state organizations (NESCAUM, STAPPA, CARB)	11-20-98
II-E-08	12-8-98	A. Stout, EPA, re 6-18-98 call with R. Long, Earth Island Institute	11-20-98
II-E-09	12-8-98	J. Revelt, EPA, re 6-18-98 meeting with U.S. Chamber of Shipping/American Waterways Operators	11-20-98
II-E-10	12-8-98	A. Stout, EPA, re 7-1-98 field trip to Westerbeke	11-20-98
II-E-11	12-8-98	J. Revelt, EPA, re 7-8-98 conference call with recreational boat builders/ NMMA	11-20-98

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Category II-F: Interagency Review Materials

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
II-F-01	12-10-98	Final versions of NPRM, regulations & regulatory impact assessment as forwarded to OMB on 11-23-98	11-25-98
II-F-02	12-10-98	Draft NPRM, regulations & regulatory impact assessment as forwarded to OMB on 11-23-98	11-25-98
II-F-03	12-10-98	Draft NPRM, regulations & regulatory impact assessment as forwarded to OMB on 11-21-98	11-25-98
II-F-04	12-10-98	Draft NPRM, regulations & regulatory impact assessment as forwarded to OMB on 11-9-98	11-25-98
II-F-05	12-10-98	Draft NPRM, regulations & regulatory impact assessment with changes made between initial draft and final version as cleared by OMB	12-2-98
II-F-06	12-10-98	J. Revelt, EPA, to Air Docket re CI Marine NPRM National Security Exemption Language sent to OMB	12-4-98
II-F-07	12-21-98	J. Revelt, EPA, to Air Docket re CI Marine NPRM National Security Exemption Language sent to OMB	12-11-98
II-F-08	12-21-98	J. Revelt, EPA, to Air Docket re CI Marine NPRM Briefing for OMB	11-5-98

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Category II-G: Comments Received After the Comment Period

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
II-G-01	6-23-98	J. Ng, Westerbeke Corporation	6-19-98
II-G-02		See II-D-08	
II-G-03	6-26-98	M. Kenny, California Air Resources Board, Sacramento, CA	6-22-98
II-G-04	6-30-98	K. Levin, Seaworthy Systems, Inc., Orinda, CA	6-23-98
II-G-05	7-2-98	J. Grumet, Northeast States for Coordinated Air Use Management (NESCAUM), Boston, MA	6-22-98
II-G-06	7-20-98	R. Conanchey, ABS Americas, Houston, TX	7-10-98
II-G-07	7-24-98	C. Brady, General Electric International (GE), Inc., Cincinnati, OH	7-17-98
II-G-08	9-2-98	H. Mayer, Euromot, to J. Revelt, EPA	7-1-98
II-G-09	9-2-98	D. McElroy, Alaska Diesel Electric, to J. Revelt, EPA	6-19-98
II-G-10	9-9-98	J. Carmody, Santa Barbara County Air Pollution Control District (SBCAPCD), to M. Samulski, EPA, re Marine Engine Replacement Programs	7-21-97
II-G-11	9-9-98	J. Carmody, SBCAPCD, to M. Samulski, EPA, re Marine Engine Replacement Programs	12-1-97
II-G-12	12-10-98	Article, Diesel Progress, "Cat Gears Up Next Generation Fuel Systems"	8-98
II-G-13	12-10-98	Article, Diesel Progress, "The Year in Review: The Beat Goes On"	6-98

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Subcategory IV-A: EPA Studies or Contractor Reports

<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addressee, Title or Description, etc.</u>	<u>Date of Document</u>
IV-A-01	3-11-99	Final Report "Emission Testing of Nonroad Compression Ignition Engines," prepared for EPA by Carroll/Urban, contract #68-C4-0042	9-95
IV-A-02	11-23-99	"Report to Congress: Emission Control Technology for Diesel Trucks," EPA420-R-93-010	10-93
IV-A-03	11-23-99	"Estimated Economic Impact of New Emission Standards on Heavy-Duty On-Highway Engines," EPA420-R-97-009	3-97
IV-A-04	11-23-99	"In-Use Marine Diesel Fuel," prepared for EPA by ICF Consulting Group	8-99
IV-A-05	11-23-99	"Update of EPA's Motor Vehicle Emission Control Equipment Retail Price Equivalent (RPE) Calculation Formula," prepared for EPA by Jack Faucett Associates	9-4-85
IV-A-06	11-23-99	"Locomotive Technologies to Meet SOP Emission Standards," prepared for EPA by Acurex Environmental Corporation	8-13-97
IV-A-07	11-23-99	"Commercial Marine Emissions Inventory for EPA Category 2 & 3 Compression Ignition Marine Engines in U.S. Continental & Inland Waterways," prepared for EPA by Carnegie Mellon University	8-21-98
IV-A-08		Final Report "Marine Diesel Engine Testing," prepared for EPA by SwRI	9-99
IV-A-09		Final Report "Nonroad Engine Emissions Testing," prepared for EPA by SwRI	9-99

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**Category IV-D: Correspondence Received from Persons
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<u>Document Number</u>	<u>Date Rcvd in Docket</u>	<u>Commentor, Addresses, Title or Description, Etc.</u>	<u>Date of Document</u>
IV-D-01	2-1-99	Working Document Relating to Details of Significant Amendments to Recreational Craft Directive 94/25/EC with Regard to Inclusion of Engine Exhaust & Sound Emission Requirements, European Commission	9-29-97
IV-D-02	2-19-99	G. Hellen, Wartsila NSD	1-13-99
IV-D-03	2-19-99	K. Metcalf, Chamber of Shipping of America	1-26-99
IV-D-04	3-8-99	W. Passie, Caterpillar, to J. Revelt, EPA, re interaction with American Bureau of Shipping	2-8-99
IV-D-05	3-8-99	Final Report "Shipboard Marine Engines Emission Testing for U.S. Coast Guard," prepared for Volpe National Transportation Systems Center & U.S. Coast Guard by Environmental Transportation Consultants	Undated
IV-D-06	2-18-99	R. Chretien, Cummins Wartsila	2-11-99
IV-D-07	2-26-99	L. Fiffick, Port of Houston Authority	2-24-99
IV-D-08	2-24-99	E. Reilly, American Bureau of Shipping	2-19-99
IV-D-09	2-24-99	E. Reilly, American Bureau of Shipping (IV-D-08 not the same)	2-19-99
IV-D-10	3-15-99	L. Joyner, Hatteras Yachts	3-12-99
IV-D-11	3-15-99	J. Van Buskirk, Crowley Marine Services, Inc.	3-12-99
IV-D-12	3-15-99	D. Banks/R. Lichtner/S Bucheger, Mercury Marine	3-12-99
IV-D-13	3-15-99	E. Munsell, Dept. of the Navy	3-12-99
IV-D-14	3-15-99	Brann/Klippel, GM Electro-Motive	3-15-99

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IV-D-15	3-15-99	T. French, Neal Gerber & Eisenberg, on behalf of Engine Manufacturers Association	3-12-99
IV-D-16	3-12-99	R. Harkins, Lake Carriers' Assn.	3-8-99
IV-D-17	3-11-99	Elston/STAPPA, Baldwin/ALAPCO	3-11-99
IV-D-18	3-16-99	MAN B&W Diesel	3-15-99
IV-D-19	3-17-99	American Waterways Operators	3-12-99
IV-D-20	3-16-99	Euromot	3-9-99
IV-D-21	3-18-99	Air Resources Board	3-15-99
IV-D-22	3-17-99	Cummins Engine Company	3-15-99
IV-D-23	3-17-99	Transportation Institute	3-15-99
IV-D-24	3-15-99	Hvide Marine	3-15-99
IV-D-25	3-16-99	Oglebay Norton Company	3-12-99
IV-D-26	3-17-99	Haliburton Energy Services	3-12-99
IV-D-27	3-17-99	Great Lakes Fleet	3-14-99
IV-D-28	3-15-99	National Marine Manufacturers Association	3-15-99
IV-D-29	3-16-99	Caterpillar	3-15-99
IV-D-30	3-15-99	Tiara Yachts	3-12-99
IV-D-31	3-15-99	John Deere	Undated
IV-D-32		Manufacturers of Emission Controls (MECA)	3-16-99
IV-D-33	3-15-99	Chamber of Shipping of America	3-12-99
IV-D-34	3-15-99	Conlon, Frantz, etal., on behalf of Automotive Engine Rebuilders	3-11-99
IV-D-35	3-22-99	Earth Island Institute	3-15-99
IV-D-36	5-17-99	American Petroleum Institute	3-15-99

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IV-D-37	5-17-99	Fax from R. Long, Earth Island Institute, to A. Stout re Swedish materials referenced in comments/SCR ships built	3-16-99
IV-D-38	5-17-99	J. Kelly, American Waterways Operators, to A. Stout re fuel analysis data	3-9-99
IV-D-39	5-17-99	<u>Comments</u> - Latham & Watkins on behalf of Navistar	3-15-99
IV-D-40	5-17-99	D. McElroy, Alaska Diesel Electric, to J. Revelt, EPA	3-15-99
IV-D-41	5-17-99	Engine Manufacturers Association	3-15-99
IV-D-42	5-17-99	Carver Yachts	3-12-99
IV-D-43	5-17-99	R. Harkins, Lake Carriers' Assn., to A. Stout, EPA: fuel oil analysis test results	3-19-99
IV-D-44	5-17-99	<u>Comments</u> - NE States for Coordinated Air Use Management (NESCAUM)	3-15-99
IV-D-45	5-17-99	R. Harkins, Lake Carriers' Assn., to A. Stout, EPA: #2 diesel test results	4-13-99
IV-D-46	5-17-99	J. Kelly, American Waterways Operators, to A. Stout re fuel sample analyses	3-17-99
IV-D-47	5-18-99	J. Mandel, Neal, Gerber & Eisenberg, on behalf of Engine Manufacturers Association	5-13-99
IV-D-48	9-23-99	California Air Resources Board, Attachment A, Proposed California Regulations for 2001 & Later Model Year Spark-Ignition Marine Engines [Samulski/EPA]	Undated

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IV-D-49	10-18-99	D. McElroy, @seanet.com, to M. Samulski, EPA: small business flexibility concepts for CI recreational	9-17-99
IV-D-50	10-18-99	J. Gladden, Caterpillar, to A. Stout, EPA: product brochures	10-4-99
IV-D-51	10-18-99	J. Gladden, Caterpillar, to A. Stout, EPA: currently available large marine engines	10-5-99
IV-D-52	10-18-99	G. Martin, Mercury Marine, to M. Samulski, EPA: SWRi data	9-28-99
IV-D-53	10-18-99	J. Gladden, Caterpillar, to A. Stout, EPA: comments	10-8-99
IV-D-54	10-18-99	Engine Manufacturers Association (EMA) draft proposal for implementation of "NTE" concept for commercial marine engines	10-12-99
IV-D-55	10-18-99	W. Passie, Caterpillar, to A. Stout, EPA: IMO compliant	8-4-99
IV-D-56	10-18-99	J. Gladden, Caterpillar, to A. Stout, EPA: Additional data on 3600 marine engines	10-12-99
IV-D-57	10-18-99	J. Gladden, Caterpillar, to A. Stout, EPA: Emission data for large engines	10-7-99
IV-D-58	10-18-99	J. Mandel, on behalf of EMA, to R. Larson, EPA: Categorization	9-30-99
IV-D-59	11-23-99	Report "What's New in...Bypass Filtration," Fleet Owner	1-97
IV-D-60	11-23-99	Report "Cat's HEUI System: A Look at the Future?", Diesel Progress	4-95
IV-D-61	11-23-99	A. Stout, EPA: Marine Diesel Maintenance Schedules	11-16-99

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IV-D-62	11-23-99	"Treating Progress Functions as a Managerial Opportunity," Academy of Management Review	1984
IV-D-63	11-23-99	M. Brand, Cummins Engine Company, to B. Charmley, EPA: Draft Report on "Emission Testing of Nonroad Compression Ignition Engines"	11-13-95
IV-D-64	11-23-99	S. Meinhart, Caterpillar, Inc., to A. Stout, EPA: 3500 & 3600 Engine Emissions Data	4-6-99
IV-D-65	11-23-99	Presentation "Diesel Technology for the new Millennium TOPTEC"	4-21-98
IV-D-66	11-23-99	Presentation by Manufacturers of Emission Controls Association "Catalyst Technology for Diesel Engine Emission Control"	11-95
IV-D-67	11-23-99	Conference of Parties to International Convention for Prevention of Pollution from Ships, 1973, as Modified by Protocol of 1978 - Texts of Conference Resolutions 1-8 & Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines	10-22-97
IV-D-68	11-23-99	"Marine Exhaust Emissions Research Programme," Lloyd's Register	1990-1995
IV-D-69		J. Gladden, Caterpillar, to A. Stout, EPA: Reasons to move Category 2 displacement break-point to 3 liters/cyl	10-11-99
IV-D-70		J. Gladden, Caterpillar, to A. Stout, EPA: 3600 emission data	10-21-99

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IV-E-01	2-19-99	J. Revelt/EPA: 2-4-99 meeting with Lake Carriers' Association onboard Oglebay Norton	3-5-99
IV-E-02	3-11-99	J. Revelt/EPA: 2-22-99 conference call with Alaska Diesel	3-5-99
IV-E-03	4-26-99	A. Stout/EPA: 2-26-99 meeting with General Motors' Electro-Motive Division	4-8-99
IV-E-04	4-26-99	A. Stout/EPA: 3-11-99 meeting with Cummins Marine	4-8-99
IV-E-05	4-26-99	A. Stout/EPA: 3-12-99 meeting with Caterpillar	4-8-99
IV-E-06	4-26-99	A. Stout/EPA: 2-16-99 meeting with American Waterways Operators	2-18-99
IV-E-07	6-8-99	A. Stout/EPA: 4-19-99 meeting with National Marine Manufacturers Association	4-28-99
IV-E-08	6-28-99	A. Stout/EPA: 5-18-99 meeting with R. Long, Earth Island Institute (EII), & 5-27-99 meeting with R. Long (EII) & H. Fox, Sierra Club	6-23-99
IV-E-09	11-3-99	A. Stout/EPA: 10-8-99 call with Engine Manufacturers Assn. (EMA)	10-25-99
IV-E-10	11-3-99	A. Stout/EPA: 9-15-99 meeting with EMA	10-25-99
IV-E-11	11-3-99	A. Stout/EPA: 8-23-99 call with Hatteras Yachts	10-25-99
IV-E-12	11-3-99	A. Stout/EPA: 10-12-99 meeting with EMA	10-25-99
IV-E-13	11-23-99	A. Stout/EPA: 11-1-99 call with Engine Manufacturers Association	11-9-99

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Category IV-H: Interagency Review Materials

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IV-H-01	11-23-99	To OMB "Commercial CI Marine Final Rule"	11-3-99
IV-H-02	11-23-99	To OMB "Chapter 5: Environmental Impacts"	11-15-99
IV-H-03	11-23-99	To OMB "Final Regulatory Impact Analysis: Control of Emissions from Marine Diesel Engines"	11-9-99
IV-H-04	11-23-99	To OMB Draft "CI Marine Regulations"	11-9-99
IV-H-05	11-23-99	To OMB Draft "Commercial CI Marine FRM"	11-9-99
IV-H-06	11-23-99	To OMB "Summary & Analysis of Comments: Control of Emissions from Marine Diesel Engines"	11-9-99
IV-H-07	11-23-99	To OMB "Summary & Analysis of Comments: Control of Emissions from Marine Diesel Engines"	11-4-99
IV-H-08	11-23-99	To OMB Draft "Commercial CI Marine FRM"	11-4-99
IV-H-09	11-23-99	U.S. Coast Guard comments during OMB review	11-22-99
IV-H-10	11-23-99	Small Business Administration commenting during OMB review	11-17-99
IV-H-11	11-23-99	Communication between EPA & OMB	11-22-99
IV-H-12		Alaska Diesel comments during OMB review	11-23-99
IV-H-13	11-24-99	OGC: Article "Reliability of Progress Curves in Airframe Production," <i>Econometrica</i> , Volume 31 #4	10-63
IV-H-14		OGC: Article "The Persistence & Transfer of learning in Industrial Settings," <i>Management Science</i> ," Volume 36 #2	2-90

